Request to Re-evaluate WIC Blood Test Requirements;
Targeting Limited Resources for Obesity Prevention

Recommendation

The timing is excellent for the U.S. Department of Agriculture (USDA) Food and Nutrition Services (FNS) to sponsor an investigation into the current research and medical practice related to biochemical assessment and testing in the Women, Infants and Children (WIC) Supplemental Nutrition Program. In similar fashion to the work commissioned by USDA/FNS on dietary risk assessment and on updating the food packages offered to WIC participants, such an investigation has the potential to bring positive benefits to the program as it enters its fourth decade of successful operation.

Background

USDA has completed several successful initiatives in WIC. In the past ten years alone, FNS has successfully updated the standards for anthropometric assessment, standardized the clinical and dietary risks that qualify applicants to participate in the program, established standards and best practices for the nutrition and breastfeeding services offered to participants, re-focused WIC nutrition education on childhood obesity prevention and—most recently and significantly—updated the food benefits to align with U.S. Dietary Guidelines. Now is therefore a useful juncture to consider a remaining area of program modernization to align with current research and public health practice: biochemical assessment.

History of Biochemical Assessment in WIC

At the time of WIC's inception in the early 1970's, iron-deficiency anemia was a critical public health nutrition issue facing low-income women and children in this country. Studies too numerous to mention here have confirmed the success of public health initiatives, including the WIC program, in significantly reducing the prevalence of this condition (1,2,3). Structural changes in American society that contributed to this success include WIC nutrition education and breastfeeding support for low-income families (4), WIC-provided iron-fortified infant formula and cereals which led to these products being commonly available even to families not participating in WIC, and efforts by the health care provider community to screen and to treat with iron supplements when needed (1).

In the 1990's, several committees and task forces were convened to examine the evidence and make recommendations as to the frequency and type of screening for iron-deficiency. In addition to CDC, the Institutes of Medicine (IOM), the American Academy of Pediatrics (AAP) and the U.S. Preventive Services Task Force (USPSTF), among others, prepared updated guidelines. Of these, the CDC's recommendations are the most expansive. For example, the USPSTF recommends screening for pregnant women and high-risk infants only; the CDC's recommendations include screening for high risk *populations* [emphasis added] of infants, pre-school children, pregnant women and non-pregnant women of childbearing age.

USDA/FNS responded to these various investigations by revising federal regulations to bring WIC requirements related to blood tests in line with the CDC report. The result, in the 1998 revised regulations, was a compromise. Recognizing that 1) the changing health care environment makes it more expensive to conduct screening in the WIC office and 2) it is challenging at best to obtain results from an off-site health care provider, USDA relaxed the screening requirements considerably. On the other hand, the revised regulations, by adopting the recommendations in the CDC report language, maintain the assumption that iron-deficiency anemia is a critical public health nutrition issue and commits significant WIC resources to obtaining and documenting test results.

Changes in Public Health Issues Since 1998

The 10 years since the revised regulations were issued has produced new questions related to biochemical testing. A voluminous body of research and the federal government's own priorities are increasingly focused on the issue of childhood overweight, obesity and the added risks for childhood-onset diabetes. Such research suggests that scarce WIC resources should be refocused on addressing this public health epidemic. Recent research suggests:

- The prevalence of iron-deficiency anemia (IDA) in the United States has dropped significantly in infants and children, due in large part to the near-universal use of iron-fortified infant formulas (1) for infants not exclusively breastfed.
- One 5-state, cross-sectional study showed decreases of up to 75% in IDA from the early 1980s to the mid-1990s (2).
- IDA stands now at about 10.2 percent for 3 to 5 year olds (3);
- In contrast, one third of children are overweight or at risk of overweight (greater than 85th percentile BMI) (3); and,
- About two-thirds of women of child-bearing age are overweight or obese (4, 5).
- WIC's Participant Characteristics data from 2006 show that 9.9 percent of program participants reported IDA at certification, an increase of 0.4 percent from 2004.
- In contrast, 23.6 percent of participants reported high weight for height, an increase of 1.8 percent since 2007.

The cost of on-site iron-deficiency screening tests in WIC or, alternatively, the costs in staff time to follow up with participants and health care providers to obtain screening test results erodes much-needed Nutrition Services funds that are needed to educate WIC families about the new WIC foods, healthy eating and active living. Educating about fruits and vegetables, whole grains and legumes—part of preventing overweight and obesity—are also factors in preventing iron-deficiency anemia. There is no question that WIC has a role to play in screening for and educating to prevent iron-deficiency as well as other medical conditions. The questions are, instead, what is the suitable role and what level of screening is appropriate, given current public health priorities.

Questions Related to Biochemical Testing/Screening and WIC Priorities

The following questions are just some of those that need to be researched and which might be explored:

1. What is an appropriate amount of blood testing for iron-deficiency anemia to be performed/ obtained by WIC staff?
2. On what basis could a more precise definition of "high-risk" for anemia than "all low-income women and children" be developed?
3. What is the research-based justification for obtaining a blood test for anemia in the early postpartum period?
4. Given that virtually all non-breastfed infants in the U.S. receive iron-fortified infant formula, what is the risk for iron-deficiency anemia in the first year of life for an infant WIC participant? For a child WIC participant? For a child WIC participant who was not on WIC in infancy?
5. Given the disparity between the prevalence of iron-deficiency anemia and of overweight, what should WIC's priorities be in screening for, and intervening in these conditions?
6. Is it feasible to revise WIC screening for iron-deficiency anemia to be in line with the screening currently done for elevated blood lead levels? Immunizations up-to-date? At risk for overweight?
7. What is the risk that blood tests for iron-deficiency anemia will not be performed if WIC does not perform blood tests? Refer for blood tests?
8. To what extent might iron-deficiency anemia go unidentified if WIC staff does not perform blood tests? Refer for blood tests?
9. To what extent do blood tests performed in WIC clinics duplicate tests performed by health care providers

References

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